

**Workshop to Develop a Portfolio of  
Low Latency Datasets for Time-Sensitive Applications**  
27-29 September 2016  
Langley Research Center, Hampton VA

Time-sensitive remote sensing data are designed to meet the needs of decision makers who can rapidly interpret and integrate the information to guide actions more accurately and consistently. Low latency, or near-real time satellite data, contribute to activities that deliver societal benefits including disaster risk resilience, food security and sustainable agriculture, water and energy resource management, and ecosystem sustainability. NASA has expertise, research, observational infrastructure and partnerships to capture, process and deliver low latency data sets, but the extent of these assets are not fully mobilized. By articulating the urgent science-informed decision making enabled by rapid response using low latency satellite data, NASA, the community-of-practice, and stakeholders will be able to target resources to improve research results, advance application science, optimize data production, and guide technology development.

The goals of the workshop are:

1. Describe and characterize the existing NASA low latency data portfolio in Earth science;
2. Determine what near real time datasets we could have in the coming decade, what is needed by the community and the process required to provide these datasets;
3. Articulate the key underlying science questions that are answered with low latency remote sensing data; and
4. Articulate the issues and challenges of near-real time data acquisition and management.

***Expected Workshop Outcomes:***

- *Development of a portfolio for existing NASA NRT datasets and associated data products and infrastructure*
- *Identification of significant NRT shortfalls and opportunities for research and application science that would improve results*
- *Establish a community of practice and stakeholders to continue planning and coordination actions to increase and accelerate the use and utility of NRT data and target resources to address shortfalls and opportunities*

**Tuesday, September 27, 2016**

<b>8:00am</b>	<b>Registration &amp; Check-in</b>	
	<b>Speaker</b>	<b>Topic</b>
<b>8:30am</b>	Molly Brown and/or Diane Davies	Welcome to Workshop Goals and objectives for meeting <b>Day 1 – focus on data producers</b>
<b>8:45am</b>	David Green, NASA Applied Science Program, NASA Headquarters	Disasters and the application science need for NRT data
<b>9:00am</b>	Steve Neeck, NASA Headquarters	NASA HQ perspective on support for NRT data production, missions and cost

9:25am	Kevin Murphy, NASA Headquarters	The NRT portfolio concept
9:50am	Chris Justice, UMD, LANCE UWG Chair	LANCE NRT data and the role of UWG and key end users
10:15am	Pat Coronado /Kelvin Brentzel, Direct Readout Laboratory, NASA GSFC	Direct Readout Laboratory and their provision of NRT data
10.40am	Coffee break	
11:00am	William Stefanov, Associate ISS Program Scientist for Earth Observations, NASA JSC	NRT from the ISS
11:25am	Don Sullivan, NASA Ames / Jim Crawford, NASA LARC	NRT from field campaigns
11:50pm	Panel: Q & A with Speakers	
Lightening talks of products proposed to be included in LANCE		
12:20pm	Michael Goodman, NASA MSFC	NRT Lightning Imaging Sensor (LIS) from the ISS.
12:30pm	John Yorks, NASA GSFC	NRT Cloud-Aerosol Transport System (CATS) from the ISS.
12:40pm	Dan Ziskin, NCAR - Atmospheric Chemistry Observations & Modeling Laboratory	Measurement of Pollution in the Troposphere (MOPITT) NRT.
12:50pm	George Hoffman, NASA GSFC	NRT Global Precipitation Mission (GPM) from LANCE.
1:00pm	Lunch Break	
2:00pm	Katie Baynes, NASA GSFC	The Common Metadata Repository and the Earthdata Search Client: tools for the NRT Portfolio.
2:30pm	Molly Brown	Introduction of breakout group topics, objectives and directions
2:40pm	Portfolio development and gap identification for NRT data products, and discussion of NRT science questions.  <b>Outcomes:</b> ➤ Each group should review the NRT portfolio, and discuss the challenges, opportunities, data availability, and data needs for each application area ➤ Each group must <b>report at least two conclusions</b> from the breakout group in a single Powerpoint slide  LANCE user working group in parallel session.	
4:15pm	Reports back from groups (5 minutes each) (room)	<b>Designated reporter from each group with 1 PPT slide</b>
5:00pm	Open Discussion	
6:20pm	Diane Davies	<b>Conclusions and work for Day 1</b>
6:30pm	NRT Social and Poster Session at Cafeteria area	

Wednesday, September 28, 2016		
8:00am	Coffee, Registration & Check-in	
	<b>Speaker</b>	<b>Topic</b>
8:30am	Molly and/or Diane	Welcome to Day 2 – <b>Focus on Sectors</b> Goals and objectives for second day of the meeting. Paired NRT data producers and users in different sectors
8:40am	Brenda Jones, USGS	Hazards Data Distribution System / NRT Landsat
9:10am	TBD	European approach: NRT data and applications (how you are arranging and funding the sensor(s))
9:40am	Stuart Frye, NASA, GSFC	NRT data for CEOS and GEO
10:00am	Katie Baynes / Patrick Quinn	NRT Portal
10:30am	Coffee break	
11:00am	Inbal Becker-Reshef, GEOGlam / UMD and Bob Tetrault US-FAS	Agricultural and Drought Monitoring
11:20am	Andrew Moltham, NASA SPoRT, and Michael Folmer, satellite liaison for the NWS Weather Prediction Center / Ocean Prediction Center / Satellite Analysis Branch	Use of Satellite Data within Weather Decision support systems
11:40am	Wilfrid Schroeder, UMD and Brad Quayle USFS RSAC	Fire data and users
12:10am	Steve Pawson (GSFC)-GSFC and end user from USGS VAACS	GEOS 5 system for NRT aerosol applications –
12:30am	Doreen Neil / Jim Szykman, LARC and EPA or NOAA end user	NRT data for global air quality monitoring.
12:50pm	Lunch Break	
2:00pm	Molly Brown - Introduction to breakout groups	
2:10pm	Portfolio development and gap identification for NRT data products  <b>Outcomes:</b> ➤ Each group should review the NRT portfolio, and create a list data gaps, future data needs, and science questions behind each applications area ➤ Each group must <b>report at least two conclusions</b> from the breakout group.	
4:30pm	Reports back from groups (5 minutes each) (room)	<b>Designated reporter from each group with 1 PPT slide</b>
4:50pm	Open Discussion, Moderated by David Green, NASA HQ	
5:30pm	Adjourn for the day	

Thursday, September 29, 2016 (room)		
<b>8:00am</b>	<b>Coffee</b>	
	<b>Speaker</b>	<b>Topic</b>
<b>8:30am</b>	Molly and/or Diane	Welcome to Day 3 – Goals and objectives for third day of the meeting
<b>8:40am</b>	William Blackwell, MIT Lincoln Labs	Cubesats and related technologies and mission opportunities for low latency data
<b>9:00am</b>	Mike Freilich, NASA ESD	NRT data for NASA Earth Science
<b>9:30am</b>	Bill Gail, CTO of the Global Weather Corporation	The importance of NRT data for weather industry
<b>10:30am</b>	Panel Discussion – chaired by Lawrence Friedl	
<b>12:40pm</b>	David Green	Closing Remarks
<b>1:00pm</b>	<b>Adjourn</b>	